What is claimed is:

1. An image warping method comprising:

a step (a) of, if coordinates of source and target images are defined as (u, v) and (x, y), respectively, driving an auxiliary function by finding a solution of the coordinate y of the target image by leaving the coordinate v of the source image as constant;

a step (b) of preparing a horizontally warped intermediate image by applying the auxiliary function to a first backward mapping function u = U(x, y); and

a step (c) of preparing a horizontally/vertically warped target image by applying the horizontally warped intermediate image to a second backward mapping function v = V(x, y).

2. The image warping method of claim 1, wherein the first backward mapping function u = U(x, y) = $\sum_{i=0}^{N}\sum_{j=0}^{N-i} a_{ij} x^i y^j$, where a_i is a coefficient of a polynomial and N indicates an order of the polynomial.

3. The image warping method of claim 1, wherein the first backward mapping function v = V(x, y) = $\sum_{i=0}^{N}\sum_{j=0}^{N-i} b_{ij} x^i y^j$, where b_i is a

coefficient of a polynomial and N indicates an order of the polynomial.

4. The image warping method of claim 1, the step (b) comprising:

a step (d) of finding the coordinate u of the source image by receiving to apply a value of the coordinate x of the target image, polynomial coefficient(s) of the first backward mapping function, and the auxiliary function to the first backward mapping function; and

a step (e) of preparing the horizontally warped intermediate image by interpolating data of the coordinate u found in the step (d).

5. The image warping method of claim 1, the step (c) comprising:

a step (f) of applying the second backward mapping function to the intermediate image;

a step (g) of finding the coordinate v of the source image by receiving to apply values of the coordinates x and y of the target image, polynomial coefficient(s) of the first backward mapping function, and a result applied in the step (f) to the second backward mapping function; and

a step (h) of preparing a horizontally/vertically warped target image by interpolating data of the coordinate v found in the step (g).

6. An image warping method comprising:

a step (a) of, if coordinates of source and target images are defined as (u, v) and (x, y), respectively, driving an auxiliary function ($y = H_v(x)$) from a backward mapping function $v = V(x, y)$ by finding a solution of the coordinate y of the target image by leaving the coordinate v of the source image as constant;

a step (b) of preparing a horizontally warped intermediate image by applying the auxiliary function ($y = H_v(x)$) to a backward mapping function $u = U(x, y)$; and

a step (c) of preparing a horizontally/vertically warped target image by applying the horizontally warped intermediate image to the backward mapping function $v = V(x, y)$.

7. The image warping method of claim 6, the step (a) comprising:

a step (d) of, if the backward mapping functions are $u = U(x,y) = a_{00} + a_{01}y + a_{02}y^2 + a_{10}x + a_{11}xy + a_{12}xy^2 + a_{20}x^2 + a_{21}x^2y$ and $v = V(x,y) = b_{00} + b_{01}y + b_{02}y^2 + b_{10}x + b_{11}xy + b_{12}xy^2 + b_{20}x^2 + b_{21}x^2y$, respectively,

adjusting the backward mapping functions for y by leaving v of v = V(x, y) as constant to be represented by a quadratic function of $Ay^2+By+C = 0$ wherein $A=b_{02}+b_{12}x$, $B=b_{01}+b_{11}x+b_{21}x^2$, and $C=b_{00}+b_{10}x+b_{20}x^2-v$; and

a step (e) of outputting the auxiliary function ($y=H_v(x)=\frac{-B\pm\sqrt{B^2-4AC}}{2A}$) by finding a value of y of the quadratic function from a root formula.

8. The image warping method of claim 7, wherein there exist two real roots if $B^2>$ 4AC and wherein one of the two rear roots, $y^+=\frac{-B+\sqrt{B^2-4AC}}{2A}$ and $y^-=\frac{-B-\sqrt{B^2-4AC}}{2A}$, is arbitrarily selected to be outputted as the auxiliary function in the step (e).

9. The image warping method of claim 7, wherein there exists one real root ($y=\frac{-B}{2A}$) if B^2 = 4AC and wherein $y=\frac{-B}{2A}$ is outputted as the auxiliary function in the step (e).

10. The image warping method of claim 7, wherein there exist a pair of imaginary roots if $B^2<$ 4AC and wherein $y=\frac{-B}{2A}$ is outputted as the auxiliary function in the step (e) since coordinates having imaginary values substantially fail to exist.

11. The image warping method of claim 6, the step (a) comprising:

a step (f) of, if the backward mapping functions are $u = U(x,y) = a_{00} + a_{01}y + a_{02}y^2 + a_{10}x + a_{11}xy + a_{12}xy^2 + a_{20}x^2 + a_{21}x^2y$ and $v = V(x,y) = b_{00} + b_{01}y + b_{02}y^2 + b_{10}x + b_{11}xy + b_{12}xy^2 + b_{20}x^2 + b_{21}x^2y$, respectively, adjusting the backward mapping functions for y by leaving v of v = V(x, y) as constant to be represented by a linear function of $By + C = 0$ wherein $B = b_{01} + b_{11}x + b_{21}x^2$, and $C = b_{00} + b_{10}x + b_{20}x^2 - v$; and

a step (g) of outputting the auxiliary function ($y = H_v(x) = \frac{C}{B}$) by finding a value of y of the linear function.

12. The image warping method of claim 6, the step (b) comprising:

a step (h) of finding the coordinate u of the source image by receiving to apply a value of the coordinate x of the target image, coefficients a_{00}~a_{21} of a polynomial, and $y = H_v(x)$ of the step (a) to the backward mapping function u = U(x, y); and

a step (i) of preparing the horizontally warped intermediate image $I_{int}(x, v)$ by interpolating data of the coordinate u found in the step (h).

13. The image warping method of claim 6, the step (c) comprising:

a step (j) of applying the $v = V(x, y)$ to the intermediate image $I_{int}(x, v)$ of the step (b) to find a mapping function $I_{int}(x, V(x, y))$;

a step (k) of finding the coordinate v of the source image by receiving to apply values of the coordinates x and y of the target image, coefficients b_{00}~b_{21} of a polynomial, and the mapping function $I_{int}(x, V(x, y))$ of the step (j) to the backward mapping function $v = V(x, y)$; and

a step (l) of preparing the horizontally/vertically warped target image $I_{tgt}(x, y)$ by interpolating data of the coordinate v found in the step (k).

14. An image mapping apparatus comprising:

a horizontal warping processing unit providing a horizontally warped intermediate image, if coordinates of source and target images are defined as (u, v) and (x, y), respectively, by receiving a value of the coordinate x of the horizontally scanned target image and coefficients b_{00}~b_{21} of a polynomial, by finding a solution of the coordinate y of the target image by leaving v as constant to drive an auxiliary function ($y = H_v(x)$), and by applying the auxiliary function ($y = H_v(x)$) to a backward mapping function $u = U(x, y)$;

a memory storing the horizontally warped intermediate image of the horizontal warping processing unit; and

a vertical warping processing unit providing a horizontally/vertically warped target image by scanning the horizontally warped intermediate image stored in the memory in a vertical direction and by applying the scanned image to a backward mapping function v = V(x, y).

15. The image warping apparatus of claim 14, the horizontal warping processing unit comprising:

a first auxiliary function computing unit driving the auxiliary function (i.e., $Ay^2+By+C=0$) by receiving the value of the coordinate x of the horizontally scanned target image and the coefficients b_{00}~b_{21} of the polynomial and by adjusting backward mapping function for y by leaving v as constant;

a second auxiliary function computing unit finding a solution ($y = H_v(x)$) for the auxiliary function;

a u-coordinate computing unit finding the coordinate u of the source image by receiving the coordinate x of the target image, coefficients a_{00}~a_{21} of the polynomial, and a value of y for the auxiliary function;

an address and interpolation coefficient detecting unit outputting an integer part u_{int} of the coordinate u as an address

assigning a data-read position in the memory and a fraction part ($\alpha = u - u_{int}$) as an interpolation coefficient; and

an interpolation unit interpolating data $I_{src}(u_{int}, v)$ of the source image outputted from the memory with the interpolation coefficient α to output the interpolated data as the intermediate image $I_{int}(x, v)$.

16. The image warping apparatus of claim 15, wherein the interpolation unit is operated by bilinear interpolation using neighbor pixels.

17. The image warping apparatus of claim 14, the vertical warping processing unit comprising:

a v-coordinate computing unit finding the coordinate v of the source image by scanning the intermediate image stored in the memory and by receiving x and y of the target image and the coefficients b_{00}~b_{21} of the polynomial;

an address and interpolation coefficient detecting unit outputting an integer part v_{int} of the coordinate v as an address assigning a data-read position in the memory and a fraction part α ($\alpha = v - v_{int}$) as an interpolation coefficient; and

an interpolation unit outputting the target image $I_{tgt}(x, y)$ by interpolating data $I_{int}(x, v_{int})$ of the intermediate image outputted from the memory with the interpolation coefficient α

outputted from the address and interpolation coefficient detecting unit.